DOCUMENT RESUME

ED 286 494 IR 012 851

AUTHOR Barger, Robert N.
TITLE Software Evaluation: How to Winnow the Wheat from the Chaff.
PUB DATE 28 Oct 85
NOTE 6p.; Paper presented at the Annual Meeting of the Illinois Council of Teachers of Mathematics (Normal, IL, October 25, 1985).
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Courseware; Elementary Secondary Education; *Evaluation Criteria; Guidelines; Higher Education
IDENTIFIERS *Software Evaluation

ABSTRACT

Formulated as questions, these guidelines set forth criteria for use in determining the adequacy of an instructional software product. These questions are presented as they relate to five major areas: (1) the intended purpose of the software; (2) the intended audience; (3) the content of the program; (4) the quality of the instructions; and (5) the available management features. A number of additional miscellaneous considerations are also suggested, and a source for additional information is recommended. (RP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED286494

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

SOFTWARE EVALUATION:

HOW TO WINNOW THE WHEAT FROM THE CHAFF

by

Robert N. Barger
Professor of Education
Eastern Illinois University
Charleston, Illinois 61920

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Robert N. Barger

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

IR012851

A Paper presented at the Annual Meeting of the Illinois Council of Teachers of Mathematics, at Illinois State University, Normal, Illinois, 28 October 1985.

BEST COPY AVAILABLE

SOFTWARE EVALUATION:
HOW TO WINNOW THE WHEAT FROM THE CHAFF

by

Robert N. Barger

The comment is often made that there is currently a surplus of bad educational software on the market. This presents the problem of how to tell if an educational software product which one is considering purchasing will indeed be a worthwhile acquisition. The purpose of this article is to set forth a number of criteria (posed here in the form of questions) which may prove helpful in solving this problem.

WHAT IS THE INTENDED PURPOSE OF THE SOFTWARE?

Does the software have clearly defined instructional objectives? Are the objectives motivating to the student? Are the objectives sufficiently specific?

WHO IS THE INTENDED AUDIENCE?

What is the range of ages, or grades, for which the software is designed? Does the software presume prerequisite knowledge or skills on the part of the user?

WHAT IS THE CONTENT?

Is the content accurate (i.e., error-free)? Is the content current? Is the content interesting and on the level of the student's ability? Is the vocabulary used in the software at the appropriate level? Are remediation and reinforcement appropriately used (e.g.,

not too positive or too negative, not too many or too few hints, not a cause of distraction to the user)? Is there adequate response to all possible "wrong" answers? Is there internal consistency in the program (e.g., a consistent format for presenting information, and a consistent format for requesting user response)? Are additional books, equipment, or other materials required for the optimal use of the software? Does the software contain stereotypes (e.g., in regard to sex, race, ethnicity, age, or religion)? Does the software subtly promote an attitude of excessive competition or violence?

WHAT IS THE QUALITY OF THE INSTRUCTIONS?

Are the instructions to the user clear, complete, and well-formatted? Can the instructions be passed over if the user is already familiar with them? Is there internal help available to the user as the program progresses (e.g., is there the possibility of returning to the original instructions or menu, or of obtaining definitions or other information from within the program itself)?

WHAT MANAGEMENT FEATURES ARE AVAILABLE?

Can the program be modified (changed as to rapidity of progression, content, remediation, or reinforcement)? What kind of student record-keeping system is available in the program (e.g., achievement records, record of number of student attempts to answer individual questions, and time spent on individual questions)? Are there student/instructor communication features available (e.g., can the student register a comment on a question or on an answer, and/or can the instructor leave a note for the student)?

MISCELLANEOUS CONSIDERATIONS

Is there a route through (or around) every question in the program (e.g., if the student cannot answer a question, even after multiple attempts, is there a way to proceed to the next question)? Is there the possibility of early exit from the program? Does the program keep a marker on each student's place (if he/she left the program early) and return him/her to that place if he/she returns to the program? Can the software be previewed before purchase? Has the software been field-tested with audiences similar to the intended audience? What kind of licensing requirements are involved in the use and replication of the software? Is the software compatible with the system on which it is intended to be used (e.g., consider such things as size of memory, number of drives, double-sided discs, color capacity, and sound capacity)? Is the power of the computer fully utilitized by the software (is there use made of dynamic graphics, interaction, and individualization -- or could the instruction instead be done as well or better through another medium)? Is program control able to be varied, either by the student or by the program itself (e.g., as to level of difficulty, speed of presentation, motion forward or backward, number of items to be presented)? If color is used, does it enhance the lesson (either aesthetically, or by allowing color coding for identification purposes)? If sound is used,does it enhance the lesson? Can the sound be turned off? What is the quality of the documentation accompaning the software (consider both the external guidebooks or handbooks accompanying the software and any internal comments or remarks embedded in the program coding)?

CONCLUSION

The above-listed considerations may be helpful in judging the adequacy of a piece of educational software. However, no claim is made here that these considerations should be taken as definitive and exclusive. For additional information, consult Ann Lathrop and Bobby Goodson, Courseware in the Classroom: Selecting, Organizing, and Using Educational Software (Menlo Park, California: Addison-Wesley Publishing Company, 1983). Lathrop and Goodson are particularly recommended because, in addition to touching on many of the above considerations on software evaluation, they discuss the oft-neglected problem of structuring a circulation system for software usage.